DRAFT

GULFCO MARINE MAINTENANCE SUPERFUND SITE

Statement of Work

GULFCO MARINE MAINTENANCE SUPERFUND SITE

I. INTRODUCTION

A. Purpose of the Work Plan

This Work Plan sets forth certain requirements for completion of a removal action to remove or eliminate certain wastes, and to repair the cap over the former surface impoundments, thereby eliminating or reducing risks from potential exposure pathways from those wastes at or from the Gulfco Marine Maintenance Superfund Site (the "Site"). The work described herein shall be implemented upon EPA's signing of the Administrative Settlement Agreement and Order on Consent for Removal Action (AOC).

B. Description of Action

Former Surface Impoundments Cap

The former surface impoundments were three earthen pits with natural clay liners located on Lot 56 on the north side of Marlin Avenue. The impoundments were reportedly used for storage of waste oils, caustics, various organic chemicals, and waste wash waters generated during barge cleaning activities. The impoundments were deactivated in October 1981 and closed in 1982. Closure activities included removal of the liquids and the majority of the sludges. The remaining sludges were solidified with soil, which resulted in approximately 100 cubic yards of solidified sludge left in place. The former impoundments were then capped with 3-feet of clay cover and a hard wearing surface (shell). The cover was recently found to be between 2.5-feet and 3.6-feet thick, and was rutted on the western end.

The objective for the cap repair is to protect the cap's integrity by reestablishing the 3-foot thickness of the clay cover, repairing the ruts, and providing adequate erosion protection over and drainage from the cap. Specifically, the cap repair will include removing the existing vegetative cover and hard wearing surface, and reestablishing the 3-foot thickness of the clay cover with material that does not exceed a hydraulic conductivity of 1×10^{-7} cm/sec. The cap will be sloped to provide adequate drainage, and provisions will be included to provide erosion protection for the cap.

9425198

II. WORK TO BE PERFORMED – FORMER SURFACE IMPOUNDMENTS CAP REPAIR

An evaluation of the existing former surface impoundments cap was performed as part of the RI/FS. This evaluation involved the drilling and sampling of four borings through the cap, geotechnical testing of representative cap material (clay) samples, and performance of a field inspection of the cap, including observation of desiccation cracks, erosion features, and overall surface condition. The locations of the geotechnical soil borings are shown on Figure 2. These borings were drilled using direct push methods with soil samples collected for visual inspection and logging using a butyrate-lined, split-spoon sampler. Shelby tube samples for geotechnical testing were collected from a separate, immediately adjacent boring. These soil samples were tested to evaluate the construction materials and thickness of the cap. As shown in Table 7, the cap thicknesses at the four boring locations ranged from 2.5 feet to greater than 3.5 feet. The geotechnical properties (Atterberg Limits and Percent Passing # 200 Sieve) of the cap material as listed in Table 7 are consistent with those recommended for industrial landfill cover systems in TCEQ Technical Guideline No. 3 (TCEQ, 2004) and the vertical hydraulic conductivities were all better (i.e., less) than the TCEQ guideline value of 1×10^{-7} cm/sec.

A detailed field inspection of the cap was performed on August 3, 2006. The cap appeared to be in generally good condition with no significant desiccation cracks or erosion features observed on the cap surface or slopes. The cap surface consisted of a partially vegetated, crushed oyster shell surface overlying the clay layer. Some sporadic indications of animal (e.g., crab) penetrations of the cap surface were observed. Occasional debris (e.g., scrap wood and telephone poles) was present on the surface and several large bushes (approximate height of three feet) were observed, mostly near the cap edges. Drilling rig and other heavy equipment (i.e., support truck) traffic across the western end of the cap in conjunction with Site investigation activities has resulted in surface rutting of the cap in this area.

A. Preconstruction Activities

Preconstruction activities for the former surface impoundments cap repair will consist of cap inspection and assessment, preparation of cap repair engineering drawings and technical specifications, and preparation of a HASP. A topographical survey of the cap vicinity performed in conjunction with Site RI/FS activities is shown on Figure 2. The engineering drawings and technical specifications will be submitted to EPA for review and approval prior to contractor mobilization for the cap repair work. The HASP will be prepared in compliance with Occupational Safety and Health Administration and EPA requirements. The HASP will be submitted to EPA and will be in place prior to any onsite construction activities.

Sampling and Analysis Plan

Sample collection and testing associated with the former surface impoundments cap repair is summarized below. Additional details regarding sample collection and testing will be provided in the engineering drawings and technical specifications to be provided to EPA for review and approval prior to mobilization.

Sample Collection - Consistent with the cap repair objective to protect the cap's integrity by reestablishing the 3-foot thickness of the clay cover, one or more representative samples of borrow soils to be used as part of the clay cap repair will be collected for geotechnical testing. Samples will be collected using a shovel or other appropriate device directly from the proposed borrow area.

Sample Analyses - The borrow area soil sample(s) will be tested as follows:

- Soil classification using ASTM Method D2487
- Atterberg Limits (Liquid Limit, Plastic Limit and Plasticity Index) using ASTM Method D4318
- Moisture-Density Relationship using ASTM D698 (Standard Proctor)
- Hydraulic Conductivity using ASTM D5084

Construction Quality Assurance Plan

The CQAP for the former surface impoundments cap repair is provided below. This plan describes the project-specific components of the performance methods and quality assurance program to ensure that the completed project meets or exceeds all design criteria, plans, and specifications.

Responsibilities and Authorities - The CQA Officer will be Eric Pastor, P.E. of PBW. Mr. Pastor will be assisted in the day-to-day project inspection activities by other PBW personnel, all of whom will have an appropriate level of engineering and/or consulting experience for their assigned responsibilities. Field compaction of the clay material placed as part of the cap repair will be tested by a geotechnical testing subcontractor to PBW. Surface elevations of the existing clay cap and the final repaired clay cap will be determined by a Texas licensed surveying subcontractor at an appropriate number of control points to verify that the required additional lift thickness of 0.5 feet (see task descriptions below) has been attained. The final elevation of the overlying vegetated soil layer (see discussion below) will also be surveyed. EPA and/or its contractors may perform additional construction inspection/oversight at EPA's discretion.

CQA Qualifications - Mr. Pastor's and PBW's qualifications were provided to EPA in a letter dated August 26, 2005. As noted above, all PBW inspection personnel will have an appropriate level of engineering and/or consulting experience for their assigned responsibilities. Qualifications for the surveying subcontractor (Doyle & Wachstetter, Inc.) were provided to EPA in a letter dated April 24, 2007. Qualifications for the geotechnical testing subcontractor will be provided to EPA prior to mobilization.

CQA Inspection and Verification Activities – A CQA inspector will be on-site to monitor the performance of cap repair activities; verify compliance with the engineering design and technical specifications; and ensure compliance with all health and safety procedures. The CQA inspector will verify that the cap repair activities have been performed in accordance with this Work Plan and the project specifications. The geotechnical testing subcontractor will verify that compaction of the clay layer placed above the existing clay cap as part of repair activities conforms to the project specifications. The frequency and methods to be used for such testing will be detailed in the technical specifications to be provided to EPA prior to mobilization. Final surface elevations of the repaired clay cap, verification that the additional clay lift meets the project specifications, and the final elevation of the overlying vegetated soil layer will be determined by the surveying subcontractor. CQA inspection documentation will be performed in accordance with SOP No. 1 provided in Appendix A of the approved RI/FS FSP. This documentation will be retained in the project files in accordance with the requirements of Section XI of the AOC.

Regulatory Compliance Plan

As noted previously, removal actions under Section 106 of CERCLA are required to meet the substantive requirements of other laws unless an ARAR waiver is granted by the lead regulatory agency. Substantive ARARs of potential interest to the former surface impoundments cap repair include the location- and action-specific requirements discussed below. No chemical-specific requirements were identified for the cap repair activities.

Location-specific requirements – Location-specific requirements for the cap repair include the following:

- Much of the area adjacent to the north, west and east sides of the former surface impoundments is identified as wetlands on the USFWS Wetlands Inventory Map (USFWS, 2008). Potential ARARs associated with wetlands are described in EPA's Considering Wetlands at CERCLA Sites (EPA, 1994). As described therein, a primary potential ARAR related to wetlands is Section 404(b)(1) of the Clean Water Act (CWA), promulgated as regulation in 40 CFR 230.10, which generally prohibits discharge of dredged or fill material to wetlands, subject to consideration of practicable alternatives and the use of mitigation measures. Per 40 CFR 6.302(a), Executive Order 11990 further requires that any activities performed within wetland areas minimize the destruction, loss, or degradation of wetlands. Care will be taken during the cap repair work to keep impacts on adjacent wetlands to a minimum, and to restore wetland areas that may be temporarily impacted during repair activities following completion of the cap repair work.

- The former surface impoundments and surrounding area are located within the 100-year coastal floodplain. Per 40 CFR 6.302(b), Executive Order 11988 requires that any actions performed within the floodplain avoid adverse effects,

minimize potential harm, and restore and preserve natural and beneficial values of the floodplain. Care will be taken during the cap repair work to comply with these requirements.

Action-specific requirements – Action-specific requirements for the cap repair include the following:

- OSHA requirements pertaining to hazardous waste operations (29 CFR Part 1910.120) will be followed during all on-site work.

- The substantive Texas Pollutant Discharge Elimination System (TPDES) requirements for storm water discharge from construction sites apply to the cap repair work. The applicable requirements, which may include: (1) filing of a Notice of Intent (NOI) for coverage under TPDES General Permit No. TXR150000; (2) preparation of a storm water pollution prevention plan (SWPPP); and (3) compliance with the General Permit and SWPPP technical requirements, will be followed during all on-site cap repair work.

Waste Management Plan

The primary wastes anticipated to be generated by cap repair work are inert materials, such as brush and debris removed from the existing cap surface and the thin oyster shell surface layer. These materials will either be placed directly into waste haulers for transport to the non-hazardous disposal facility listed in Table 6, or will be temporarily stored in on-site roll-off bins for subsequent transport to the disposal facility. All off-site transportation and management will be performed in accordance with applicable USDOT requirements. All materials will be managed at a facility that is in compliance with EPA's "Off-Site Rule".

Emissions Control Plan

No appreciable air emissions, except for routine exhaust from vehicles and construction equipment, are anticipated during the cap repair work. Dust may be generated during clearing/grubbing and oyster shell layer removal activities. Dust control through water application and/or other measures will be performed as necessary to keep dust generation to a minimum. As a result, no air or dust monitoring during the cap repair work is proposed.

Contingency Plan

This contingency plan describes procedures to minimize hazards to human health and the environment from fires, explosions, or any unplanned sudden or non-sudden release of hazardous waste constituents, procedures to be followed in the event of a spill, and procedures to be followed for movement of equipment and personnel from low-lying areas during a high water event.

Spill Prevention – Since no liquid wastes and no hazardous wastes will be handled during the cap repair work, the potential for spills is anticipated to be low. The

greatest spill potential may be during on-site refueling/maintenance of construction equipment, or from releases from equipment hydraulic lines if a rupture were to occur. Spill control and cleanup kits along with fire extinguishers and eye wash kits will be located in the work area as a contingency for such potential spills.

Spill Response/Notification – In the event of a spill, field crews will immediately contain the spill as necessary to prevent a release and notify on-site CQA and EPA representatives. If not on-site, the EPA OSC will be notified immediately thereafter. In the event of any spill which causes or threatens a release of waste material from the Site that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondents shall immediately notify the OSC or, in the event of his/her unavailability, the Regional Duty Officer, Emergency Planning and Response Branch, EPA Region 6, 214-665-3166, and the EPA Regional Emergency 24-hour telephone number, 1-866-372-7745. In addition, in the event of any release of a hazardous substance from the Site which, pursuant to Section 103 of CERCLA, requires reporting to the National Response Center, Respondents shall immediately notify the National Response Center at (800) 424-8802 and then the OSC at (866) 372-7745.- A written report will be submitted to EPA within 7 days after a release of a hazardous substance from the Site that requires reporting to the National Response Center pursuant to Section 103(a) of CERCLA, 42 U.S.C. § 9603(a), setting forth the events that occurred and the measures taken or to be taken to mitigate any release or endangerment caused or threatened by the release and to prevent the recurrence of such a release.

Site Activities during High Water Event – In the event that a high water condition (storm surge or hurricane) is predicted for the Site during the performance of the cap repair work, the construction contractor will take appropriate precautions to secure the work area and equipment. Depending on the specific conditions, these precautions may include evacuation of the Site. The contractor and the CQA officer will work closely with the EPA representatives to determine the appropriate precautions to be taken on a case by case basis depending on the timing and severity of the predicted high water conditions.

Health and Safety Plan

Prior to Site mobilization, the contractor for the former surface impoundments cap repair will prepare a HASP in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992) and all currently applicable regulations found at 29 CFR 1910.120. The HASP will ensure the protection of the public health and safety during performance of the removal action and will be submitted to EPA for review. Changes to the plan recommended by EPA will be incorporated into the final plan that will be implemented during the pendency of the removal action. All requirements under the OSHA, 29 U.S.C. § 651 et seq., and under the laws of the State approved under Section 18 of the Federal OSHA laws, as well as other applicable safety and health requirements, will be followed. Federal OSHA requirements include Hazardous Materials Operation, 20 CFR § 1910, as amended by 54 Fed. Reg. 9317 (March, 1989), all OSHA General Industry (29 CFR § 1910) and Construction (29 CFR § 1926) standards wherever they are applicable, as well as OSHA record keeping and

reporting regulations, and the EPA regulations set forth in 40 CFR § 300, relating to the conduct of work at Superfund sites.

Schedule

The cap repair will be implemented as described herein. The name and qualifications (as necessary) of the proposed construction contractor for the cap repair removal action will be submitted to EPA within 30 days of the Effective Date of AOC. The HASP will be submitted within 14 days of EPA's approval of the construction contractor. Engineering drawings and technical specifications will be submitted within 45 days of the Effective Date of AOC. Following EPA approval of the engineering drawings and technical specifications, mobilization for the cap repair work will be performed. Depending on Site and weather conditions, it is anticipated that field activities may be completed within approximately 45 days. The Final Report (described below) will be submitted within 60 days after completion of all field activities. Any associated documentation (e.g., final survey drawings, final field density testing reports, etc.) received after the Final Report is submitted will be provided as an addendum to the report.

B. Mobilization and Site Preparation

Mobilization and site preparation will involve mobilizing personnel, equipment, supplies and incidentals onto the project site; establishing all offices and facilities necessary to implement the project; and preparation of the site for the construction work. The major components of site preparation are:

- Utility Connections - Supplying electrical and potable water sources as necessary.
- Clearing and Grubbing - Clearing and grubbing and removal of surface debris from the existing cap and adjacent area as required for access to the work and for constructing roads, work areas, and staging areas.
- Temporary Road Construction - Constructing temporary roads as necessary to provide access and egress to the site, and access and egress to the work areas.
- Work/Staging Area - Constructing work, staging and containment areas as necessary.

C. Removal Action Activities

Former surface impoundment cap repair activities will consist of the tasks described below. Additional task details will be provided in the engineering drawings and technical specifications to be submitted for EPA review and approval as described previously.

Task 1 – Debris, Brush and Shell Layer Removal – The purpose of this task is to remove all surficial material above the existing clay cap and thus allow reestablishment

of the 3-foot cap thickness. Material to be removed includes debris (e.g., scrap wood and telephone poles), vegetation, and the surficial oyster shell layer. These materials will be removed from the existing cap and from adjacent areas as necessary to facilitate cap repair. As noted above, this inert material will be transported for off-site disposal as a non-hazardous waste. This task will be considered complete when the entire surface of the existing clay cap has been exposed and the resultant surface elevations have been surveyed by the surveying subcontractor at a sufficient number of control points to allow subsequent verification of the thickness of the clay layer placed above the existing clay cap in Task 2, below.

Task 2 – Imported Clay Placement and Compaction - The purpose of this task is to reestablish the 3-foot thickness of the compacted clay cap. Imported clay from an off-site location will be tested for the geotechnical properties as described previously. This material will then be placed over the entire surface of the existing cap in a single lift and compacted as necessary to achieve the project specifications, as confirmed by field testing. The compacted lift will be at least 0.5 feet in thickness as confirmed by post-compaction elevation survey of the aforementioned control points by the surveying subcontractor. The final grading plan for the compacted clay surface will be provided in the engineering drawings and technical specifications.

Task 3 – Topsoil Layer Placement and Vegetation - The purpose of this task is to establish a vegetated surface to protect the clay cap and facilitate run-off from the cap area. As such, this task includes the importation of topsoil from an off-site borrow source and placement of the topsoil in an approximately one-foot thick uncompacted lift. The topsoil will then be seeded with an appropriate mixture of grasses for Site conditions, and mulched and irrigated as necessary to establish vegetation. The final grading plan for the final cap surface will be provided in the engineering drawings and technical specifications. A topographic survey of the final cap surface will be performed by surveying subcontractor.

D. Site Restoration and Demobilization

After completion of the cap repair work, any temporary roads and work areas will be dismantled and removed. Personnel, equipment, office trailer, supplies and incidentals that were used on the removal project will be removed from the site, unless required for the completion of other work at the Site.

E. Preparation of Final Report

A Final Report will be submitted within 60 days after completion of all field activities. Any associated documentation (e.g., final survey, contractor quantity documentation, etc.) received after the Final Report is submitted will be provided as an addendum to the report. The Final Report will summarize the activities performed and will be submitted to the RPM/OSC for review and approval. The Final Report will include a description and an as built survey of the repaired cap, copies of all laboratory and field testing results, and accompanying appendices containing all relevant documentation generated during the removal action.